DOCUMENT RESUME

ED 114 677 95 CE 005 759

AUTHOR	McCormick, Jim; And Others
TITLE	Careers: Units of Study, High School Level.
INSTITUTION	South-Western City School District, Grove City, Ohio.
SPONS AGENCY	Bureau of Occupational and Adult Education (DHEW/OE), Washington, D.C.
REPORT NO	VT-102-205
BUREAU NO	V357016
PUB DATE	73
CONTRACT	OEC-0-73-6370
NOTE	62p.
EDRS PRICE	MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS	Behavioral Objectives; *Career Education; *Cognitive Development; *Curriculum Guides; Grade 9; Grade 10; Integrated Curriculum; Language Arts; *Learning Activities; Mathematics; Post Testing; Pretesting; Science Units; *Secondary Education; Social Studies Units; Unit Plan; Units of Study (Subject Fields)

ABSTRACT

The curriculum guide contains units of study about careers appropriate for high school level students in grades 9 and 10. The units focus on the four areas of mathematics, science, social studies, and language arts. The document contains a discussion of fundamental cognitive skills and a rationale for each. The format for presenting each goal of the individual units consists of six columns headed: objectives, suggested implementation activities, thinking skill process, curriculum relationship, psychomotor relationship, and affective relationship. Pretests and post tests are provided for each unit. (LJ)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

CE005759

ED114677

CAREERS

UNITS OF STUDY

*

HIGH SCHOOL LEVEL

Jim McCormick
Bobby Sparkman
Pete Allen
Tom Bassett
John Drummond
Harold Matney
Marty Davis

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

South-Western City Schools
465 Kingston Ave.
Grove City, Ohio 43123

Martin L. Stahl, Ph. D.
Superintendent of Schools

701

CE005 759

FORM A

Program Area: Career Education

Contract No. OEC-0-73-6370: Career Education Materials Selection

Project No. V 357016

Submitted by: DCOAE (Deputyship) BOAE (Bureau) DVER (Unit)

Name of Submittor: Peat, Marwick, Mitchell & Co.
1025 Connecticut Avenue, N.W.
Washington, D.C. 20036

(J. Ashbridge Perkins, Jr., Director)

Number of Project Material Descriptions Attached: 1 (2 Similar Items)

(Title: Careers: Units of Study, High School Level)

(Source: South-Western City Schools, Grove City, Ohio)

Date Submitted: December 5, 1973

FORM B

IDENTIFICATION DATA/DESCRIPTORS

Title: Careers: Units of Study, High School Level

Volume or Document #: #701 and Unit III Date: ---

Authors: Martin Stahl, and others

Publisher/Source: South-Western City Schools
465 Kingston Avenue
Grove City, Ohio

Number of Items in Set: Two Similar Items

Set Consists of: Two Curriculum Guides: (1) Career Education Unit III, High School Level; and (2) Careers: Units of Study, High School Level.

Basic Thrust of Material: Curriculum

Major Career Education Objectives Served: (1) Identify and integrate occupational and non-vocational interests, skills, values and needs in order to bring about a more thorough and accurate self-understanding; (2) Apply learning in school to the conditions and demands of out-of-school environment; and (3) Acquire an understanding of various aspects of the world of work.

Grade Levels: Grades 9-10

Reading Levels: Grades 9-10

Content/Discipline Area: Language Arts, Mathematics and Social Sciences

Target Populations: Students and Instructional Personnel

Special Note: This unit was scored by the PMM&Co. assessors at 165 which is on the low end of Class II. It is submitted however because it is the high school material to complement the K-6, 7-8, materials submitted and assessed as Class I from South-Western City Schools and is covered by the same evaluation report.

INTRODUCTION:

It is not the intention of the committee that every child will participate in every activity suggested, or that every teacher will utilize the activities just as stated. Instead, the suggested activities are presented with the hope that they may stimulate you, the teacher, to develop many interesting and productive experiences with the children in the development and implementation of this unit.

As you proceed through the unit, the committee requests that you add those activities which are appropriate for your students and eliminate those which are not. The committee is interested in learning how adaptable you find the unit and requests that you make comments -- note successful experiences you have in teaching the unit as well as comments relating to areas you find unsatisfactory. The only way the committee can evaluate the unit is by your implementing it and helping them to identify strengths and weaknesses within it.

Thinking skills inherent in the suggested activities have been identified. A brief definition and rationale for each skill is included in the unit.

Please add activities, resources and anything you feel will enrich or will make the unit more relevant to our students.

VT 102205

FUNDAMENTAL COGNITIVE SKILLS
AND RATIONALE FOR EACH

OBSERVING - The ability to notice one or more attributes of objects, pictures, stories, etc.

Practicing observing helps children become more aware of the multifaced world in which they live. It fosters the desire and ability to probe beyond the obvious, to differentiate more precisely, to use all their senses and to bring previous experience to bear on new observations. Each child has the opportunity to experience success each time he notices something else and verbalizes his perceptions. The perceptions of others can enrich his own store of information.

By conducting such practices using different materials, teachers can identify how and what individual children observe. Follow-up lessons can then be designed to develop and extend this ability.

RECALLING - The ability to recall specific data from something observed previously.

Recalling requires children to recollect observations they have made in the past. This is a more difficult task than observing something in the present and requires more mental processing than people generally tend to think. Practicing recall encourages children to store their perceptions and bring certain ones back to mind when they are needed. Recalling on focus requires the rejection of irrelevant stored perceptions and the selection and verbalization of those which are relevant to a given focus.

NOTICING DIFFERENCES - The ability to identify one or more differences in attributes of two or more objects, pictures, events, etc..

This skill requires children to isolate characteristics which distinguish two or more things from one another. The ability to determine distinguishing characteristics, even among similar things, is essential to keeping the bases for organization specific and for recognizing the uniqueness of all things.

NOTICING SIMILARITIES - The ability to identify one or more similar attributes of two or more objects, pictures, events, etc.

This skill builds on observations or recollections of the characteristics of single items by asking children to focus on characteristics which are <u>common</u> to two or more items. Commonality is a major basis for organizing different things and is particularly important as the basis for concept formation.

ORDERING - The ability to order objects or events according to given attributes or criteria, e.g. "Which of these is the biggest?" "Which is smallest?" "Which are middle-sized?" etc.

Ordering items requires noticing <u>degrees</u> of difference in certain characteristics of two or more items. It requires not only the discrimination of the characteristic, but the determination of the extent of its presence in comparison with one another. Ordering is another basis for organizing data.

GROUPING - The ability to put together several objects, pictures, etc. based on one or more common attributes or other relationships.

Activities using this skill involve children in seeking any relationship among items: functional, locational, descriptive, etc.. The basis for grouping reflects the individual's own concept of relationship among the items. By working in groups on this task, children are able to profit from the different ways different people relate the same data.

CONCEPT LABELING - The ability to give a name or label to an item or a relationship among a group of items

Labeling is an economical way of thinking of one or more things. By seeking a variety of labels, the teacher fosters the idea that many labels are synonyms, or different symbols for the same idea. This skill is an important one in conceptual'zation and language development. It permits greater flexibility in promoting the ability to deal with an idea through a symbol rather than with the specific(s) to which it refers.

CLASSIFYING - The ability to include items under a label or with others called by the same name.

Many of the earlier skills, e.g. similarities, differences, and grouping are, technically, classifying skills, but at this level we refer to subsuming items under a label or putting an item with others called by a certain name. Decision-making based on knowledge is required in that the child must decide whether or not a given item belongs with others under a certain general term. To do this, he needs to know what idea the label represents and the critical attributes of anything that would appropriately belong under it or with others called by that name.

CONCEPT TESTING - The ability to differentiate between critical and optional attributes, e.g. "If this cup didn't have a handle, would it still be a cup?"

This task helps children refine their concepts by helping them distinguish critical from optional attributes. By having to accept or reject an item as a member of a class on the basis of changed attributes, he must first, clarify his concept to himself and then, make and defend his decision on the basis of his understanding. The process thus promotes sharpening of definitions, as well as clarification and extension of concepts.

INFERRING CAUSES - The ability to make inferences about how one or more things caused something else.

While people tend to accept the idea that it is natural for children to ask "why?" and "what happens because?", our response, too frequently is to imply that there is one "right" answer and that only adults have them. By asking children to probe for what they think are some causes or effects of phenomena they observe, we imply instead that there are many possible ideas that they can search for and find for themselves and from one another. By asking them to support their inferences, we are, in effect, asking them to "think out loud" and verbalize what led them to their idea. This practice not only encourages children to take responsibility for their comments but, also, helps other children by providing different models for arriving at ideas and by clarifying points so that others can build on them.

INFERRING EFFECTS - The ability to make inferences about the variety of effects of one thing on other things.

Several other important ideas develop through the practice of these inferences. One is the concept of multiple causality, the idea that, generally, few phenomena occur randomly or as a result of a single cause, but rather, as a consequence of many factors acting in concert or in sequence. Another is the concept of multiple consequence, that, generally, phenomena have more than one single effect. A third major idea is that one can "know" or make "educated guesses", on the basis of clues and past experience. Since one cannot and need not witness everything first hand in order to arrive at warranted explanations, knowledge of this power can be most important to the child as he encounters and tries to explain the phenomena in his world.

INFERRING FEELINGS - The ability to make inferences about how people feel in particular situations.

This task is really a special case of inferring causes and effects in which the focus is on human interaction situations where feelings play an important part. Inferring feelings in different situations can promote empathy with others and some clues toward understanding and ultimetely finding solutions to human relations problems.

CONCLUDING - The ability to draw conclusions about items or situations based on observations and inferences.

In having children draw and support conclusions, we are asking them for their interpretation of a given situation after a discussion in which many ideas were expressed. Concluding requires more than summarizing in that it asks for both synthesis and decision-making. Children need to decide which ideas are important and how to pull these ideas together into a statement which expresses what they think about the situation. Conclusions, therefore, are individual, though many may come to the same conclusion.

GENERALIZING - The ability to extend conclusions about known situations to others like it.

Generalizing, along with the processes which precede it, is essential to the whole idea of transfer. Because we cannot and need not examine first-hand every situation we will encounter, generalizing is an economical tool for thinking about new situations in terms of our conclusions about those with which we have had experience. Because generalizations have not been tested in all situations to which they have been extended, children need to learn to keep them tentative and qualified and to remain open to revision where exceptions are encountered.

QUESTIONING - The ability to ask pertinent questions about a new situation based on knowledge of similar situations.

In this task, children use what they have learned about situations they have experienced first-hand as a basis for formulating questions about similar, new situations. Questioning is important not only because it reveals the degree of children's awareness of the attributes of something, causes, effects, etc. Also, questioning at this level begins a recycling of the inquiry process at increasingly higher level of understanding and skill.

ANTICIPATING - The ability to predict possible consequences of a new or changed situation based on knowledge of similar situations.

In predicting possible consequences of a new or changed situation, children are basing their predictions on what they have decided that should be able to expect from such situations. By explaining their predictions, they verbalize the ideas they are applying, and by supplying necessary conditions, they indicate what else they assume is so when they make their predictions. This process provides the opportunity to assess and rethink understandings in the light of new or changed situations. It fosters refinement of knowledge and he ps counteract the tendency to hang on to conclusions and generalizations hastily drawn.

MAKING CHOICES - The ability to make choices based on given c iteria, for example, "Which of the following would be the best item of clothing to wear if you wanted to keep warm?"

Making choices requires evaluation by deciding the worth or value of given items or situations in terms of certain criteria or sets of conditions. The process requires knowledge of the requirements imposed by the criteria or the conditions, the ability to apply these to the items or situations in question, and the ability to verbalize one's choice and defence.

Reprinted by permission of:

INSTITUTE OF STAFF DEVELOPMENT
BASIS PROGRAM
3000 Biscayne Blvd.
Suite 316
Miami, Florida 33137

TABLE OF CONTENTS

CAREERS: UNIT II

Mathematics

A. Pre and Post Test for Careers of Unit II
B. Goal (1) -- Objective 1a
C. Objectives 1a, c, d, e, f, g
D. Goal (2) -- Objectives 1h, 2a, b, c
E. Objectives 2d, e, f, g, h
F. Goal (3) -- Objectives 3a, b, c, d
G. Objectives 3e, f, g, h
H. Goal (4) -- Objectives 4a, b, c
I. Objectives 4d, e, f
J. Goal (5) -- Objective 5a
K. Objective 5b
L. Objectives 5c, d
M. Objectives 5e, f
N. Objective 5g
O. Pre and Post Test for Mathematics Unit II

Science

A. Pre and Post Test for Careers
B. Pre and Post Test Content
C. Goal (1) -- Objectives 1a, b, c, d, e
D. Objectives 1f, g, h, i, j
E. Objective 1k
F. Goal (2) -- Objectives 2a, b, c, d, e
G. Objectives 2f, g, h, i
H. Goal (3) -- Objective 3a

Social Studies

A. Pre and Post Test -- Part I
B. Goal (1) -- Objectives 1a, b, c
C. Graph
D. Objective 1j
E. Objective 1e, f, g
F. Objective 1g

Social Studies (continued)

G. Goal (2) -- Objective 1a
H. Goal (3) -- Objectives 1a, b
I. Objective 1c
J. Objective 1c, continued
k. Pre and Post Test -- Part II
L. Goal (1) -- Objective 1a, b
M. Goal (2) -- Objective 1a
N. Objective 1b, c
O. Objective 1c, continued
P. Goal (3) -- Objective 1a
Q. Goal (4) -- Objective 1a

Language Arts

A. Pre and Post Test
B. Goal (1) -- Objective 1a, b, c, d, e
C. Objective 1f, g, h, i
D. Objectives 1j, k, l
E. Goal (2) -- Objectives 2a, b, c
F. Objective 2c, continued
G. Goal (3) -- Objectives 3a, b
H. Objectives 3b, continued, 3c, d, e
I. Goal (4) -- Objective 4a

Pre and Post Test of Unit II

USE THE FOLLOWING LIST OF OCCUPATIONS TO ANSWER QUESTIONS 1-6.

Court Reporter	Draftsman	Systems Analyst
Clerk-Typist	Computer Operator	Policeman
Day Care Center Worker	4-H Club Worker	Interior Decorator
Electrical Engineer	Surveyor	Bank Teller
Real Estate Salesman	Stock Broker	Meat Cutter
FBI Agent	Mail Carrier	Cement Finisher
Tool and Dye Maker	Teacher	Electroplater
Delivery Man	Set Up Man	Purchasing Agent

1. Select four occupations from the list that you would place in the job cluster Business and Office.

a. c.
b. d.

2. Select four occupations that you would place in the job cluster Consumer and Homemaking.

a. c.
b. d.

3. Select four occupations that you would place in the job cluster Construction.

a. c.
b. d.

4. Select four occupations that you would place in the job cluster Manufacturing.

a. c.
b. d.

5. Select four occupations that you would place in the job cluster Marketing and Distribution.

a. c.
b. d.

6. Select four occupations that you would place in the job cluster Public Service.

a. c.
b. d.

7. Select ten occupations from the list and construct an application of mathematics in that occupation.

a.

b.

GOAL: (1) To introduce the axioms of multiplicative and additive inverses. To apply the basic concepts to the solution of equations and problems.

OBJECTIVE	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION SHIP
1.a. Given a set of numerical expressions involving directed numbers and the operation subtracting, each student will change the expression into an addition problem and simplify with a total of 90% accuracy.	1a.1 Many of the algebraic concepts will be presented through the lecture method with utilization of a question and answer period.	1a.1 Observing Recalling Questioning Concluding	1a.1 Math Science Social Studies Language Arts		1a.1
	1a.2 Chalkboard activities in which the class analyzes procedure and content.	1a.2 Recalling Similarities Differences Labeling Classify Generalize Making Choices Concept Test	1a.2 Math		1a.2
	1a.3 Oral questioning about previously studied material and as an initiating activity for new material.	1a.3 Recalling Questioning Concluding	1a.3 Math Language Arts Social Studies		1a.3
	1a.4 Individual conferences for those needing additional guidance and direction.	1a.4 Observing Recalling Questioning Concluding	1a.4 Math Science Language Arts Social Studies		1a.4
1b. Given a set of polynomials, the student will perform the operation of addition at a 90% level.	1bi - same as lai, i= 1,2,3,4	1bi - same as lai			
1c. Given a set of polynomials, the student will perform the operation of subtraction with 90% proficiency.	1ci - same as lai, i = 1,2,3,4	1ci - same as lai			
1d. The student will be able to perform the operation of division of monomials with 90% accuracy.	1di - same as lai, i = 1,2,3,4	1di - same as lai			3.

OBJECTIVES	IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
1e. Each student will be able to transform given equations into equivalent equations and give the reasons for such transform-ations with 80% accuracy.	1ei - same as 1ai, i = 1,2,3,4	1ei, same as 1ai			
1f. Given a set of simple linear equations in one variable, each student will be able to find the solution by inspection with 80% accuracy.	1fi - same as 1ai, i = 1,2,3,4	1fi - same as 1ai			
1g. A systematic approach to solving "word" problems is necessary. After read-ing such problems care-fully, the student will translate the relation-ships given in the problem into an equation and solve it, all with 70% accuracy.	1g.1 Small group discussion will be used to study certain algebraic concepts and to enhance the communication concept.	1g.1 Recalling Differences Similarities Generalizing Concluding Questioning Make Choices	1g.1 Math Social Studies		1g.1
1h. Each student will solve equations by adding or subtracting polynomials with 80% accuracy.	1h. - same as 1ai, i = 1,2,3,4	1hi - same as 1ai			

GOAL: To use the properties of order in the set of real numbers.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
2a. Given a set of mathematical statements each student will apply the axioms of inequality to determine true statements with 80% accuracy. 2b. Given any assertion, mathematically written, the student will write an indirect proof of that assertion with 70% accuracy. 2c. Each student will solve a set of inequality statements using the concept of transformation. This should be accomplished with 80% proficiency. 2d. The student will graph the solution sets of several inequality statements on a number line with 80% accuracy. 2e. Given a set of compound open sentences, each student will solve and represent the solution set	2Ji - same as lai, J = a,b,c,d,e,f. i. = 1,2,3,4	2Ji - same as lai			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
2e. continued... graphically with 80% accuracy. Example: $-2 = X + 3 < 7$					
2f. Each student will graph the solution set of open sentences involving absolute value with 80% accuracy. Example: $\|X-2\| \leq 5$					
2g. Given a set of "verbal" problems, each student will solve these problems that involve both equations and inequalities with 80% accuracy.	2g.1 - same as 1g.1	2g.1 - same as 1g.1	2g.1 Math Social Studies		
2h. From a set of specified problems, the student will be able to recognize those that have no solution and state the reason for no solution, all with 80% accuracy.	2h.1 - same as 1g.1	2h.1 - same as 1g.1			

GOAL: (3) To introduce the concept of ordered pairs of real numbers.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
3a. Given a set of open sentences in two variables, the student will select solution sets using specified replacement sets. This should be accomplished with 80% accuracy. 3b. Each student will locate ordered pairs of real numbers in the coordinate plane. The performance level is 90%. 3c. The student will be able to construct the graph of linear equations by determining correct ordered pair solutions with 80% accuracy. 3d. Given a set of linear inequalities in two variables, each student will construct the graphs of the linear inequalities with 80% accuracy.	3Ji - same as lai J = a,b,c,d,e,f,g,h i = 1,2,3,4	3Ji - same as lai			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
3e. Given two points on a graph, each student will determine the slope of the line that connects the two points. This should be accomplished with 90% accuracy.					
3f. Each student will graph a line with a given slope containing a given point. Several of these will be done, all with 80% accuracy.					
3g. The student will use the slope intercept form to find the slope and graph of a linear equation with 80% accuracy.					
3h. Each student will determine an equation of a line with a given slope and p point, or containing two given points. This should be accomplished with 80% accuracy.					

GOAL: (4) To solve systems of linear sentences in two variables by graphic and non-graphic means.

OBJECTIVES	IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
4a. Given a set of linear systems, the student will distinguish as to whether or not each system is inconsistent or consistent. If consistent, the solution set will be arrived at by graphic means. All should be accomplished with 80% accuracy.	4Ji - same as 1ai J = a.b.c.d.f i = 1,2,3,4	4Ji - same as 1ai	4a.1 Math Science Business Social Studies	4a.1	
4b. Each student will solve a given set of linear system by graphing. The proficiency level is 80%.			4Ji - same as 4a.1 J = b,c,d,f	4b.1	
4c. Given several pairs of linear equations in two variables, the student will solve using the linear combinations method at a 80% level of performance.				4c.1	
4d. Given several pairs of linear equations in two variables, the student will solve using the substitution method. This should be accomplished with 80% accuracy.				4d.1	

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
4e. Given a variety of "verbal" problems, each student will construct linear equations in two variables and solve these systems with 70% proficiency.	4e.1 - same as 1g.1	4e.1 - same as 1g.1	4e.1 Math Social Studies		4e.1
4f. Each student will solve systems of linear inequalities by graphing with 70% accuracy.				4f.1	
GOAL: (5) To provide a situation in which each individual will be able to relate the skills and knowledge obtained to selected career choices.					
5a. The student will be exposed to and engaged in the exploration of various careers from the job cluster construction.	5a.1 Tour the Industrial Arts lab and Production lab that are part of our school facility. 5a.2 Simulation: If you were a draftsman, you might be asked to solve problems similar to the one given below. A draftsman was required to divide a 170° angle in such a way that the largest angle measured 10° more than the second largest, the second largest measured 10° more than the third largest, and so on. 1. Find the measure in degrees of the smallest angle. 2. Find the measure in degrees of the largest angle. 3. What basic mathematical tools would the draftsman use to draw the resulting five angles? 4. Discuss some other tasks of the draftsman.	5a.1 Observation Recalling Similarities 5a.2 Recalling Differences Similarities Generalizing Concluding Making Choices	5a.1 Math Science 5a.2 Math Science	5a.2	5a.1 5a.2

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	5a.3 Simulation: Assume that you are a contractor or possibly a manager for the lumber company. You have a rough sketch of a ranch style home. (this will be provided the student). You must determine the number of ½" x 4' x 8' plywood necessary to cover the floor joists. Your estimate should be fairly close. 1. Approximately how many pieces of plywood will it take? 2. Approximately how many square yards of carpet would be needed if everything got carpet with the exception of the kitchen and foyer? 3. If the average cost of the carpet per square yard was $9.00 installed, what would it cost to carpet the house when completed? 4. Construct another question that you would like to have answered about the house.	5a.3 Recalling Differences Similarities Anticipating Generalizing Concluding Making Choices Ordering (deciding plywood, least amount, maximum amount) Questioning	5a.3 Math Science	5a.3	5a.3
5b. The student will be exposed to and engaged in the exploration of various careers from the job cluster Manufacturing.	5b.1 Simulation: You have studied enough mathematics to be able to solve some of the problems that a machinist might find in his work. One such problem might be: A machinist operating a boring mill (used to make holes in metal) received a set of blueprints which were drawn to the scale 1" = 1'. 1. A drilled hole is to measure 3" in diameter. What should the diameter of the hole on the blueprint be? 2. If the actual diameter of a boring must not differ from the specified size by more than 1/32", what are the maximum and minimum diameters acceptable for a hole with a specified diameter of 2½"? (A blueprint will be provided.)	5b.1 Recalling Grouping (functional ratio) Ordering Concluding Generalizing	5b.1 Math Science	5b.1	5b.1 11.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	5b.2 Simulation: A lab situation will be set up in which the students will measure the diameter of various objects using a micrometer.	5b.2 Recalling Observing Ordering Concluding	5b.2 Math Science	5b.2	5b.2
5c. The student will be exposed to and engaged in the exploration of various careers from the job cluster Marketing and Distribution.	5c.1 Two resource people will be invited, one from a banking firm, and one from an insurance company, to give their viewpoints on the extent and nature of mathematical applications to their respective careers. These will be separate presentations and will be video taped for use in other classes. After each presentation the class will analyze the various points suggested by the speakers. They should look for any patterns that might apply to many others in that occupation, and suggest any other mathematical applications that they feel might apply to that career.	5c.1 Observing Recalling Differences Similarities Infer Causes Infer Effects Concluding	5c.1 Math		5c.1
5d. The student will be exposed to and engaged in the exploration of various careers from the job cluster Public Service.	5d.1 Simulation: The field of pedagogy, art and practice of teaching, ranks as the largest of all the professions. Here is a problem involving elementary statistics that a teacher might encounter in his work. Can you solve it? The scores on an American History test were: 88, 81, 76, 65, 32, 100, 92, 79, 76, 47, 64, 88, 94, 85, 76. 1. What was the mean score? the median? 2. Draw a frequency polygon for this data. 3. What is the mode of the distribution? 4. What other questions might be considered regarding this data?	5d.1 Recalling Questioning Ordering Grouping	5d.1 Math		5d.1

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
5e. The student will be exposed to and engaged in the exploration of various careers from the job cluster Business and Office.	5e.1 Simulation: Just as mathematics has been appropriately described as "the language of science", so has accounting often been called the "language of business". The cost accountant of a certain company was asked whether or not the company should continue to manufacture a mechanical can opener which had been one of its best-selling products twenty years ago. Comparative costs, in cents per unit, were as follows: Then / Now Labor 8 / 12 Materials 3 / 5 Marketing/ 1 / 2 Miscellaneous 2 / 5 The company sold the can opener for 18¢ twenty years ago, and present market trends showed that 27¢ was the absolute maximum selling price today. 1. What was the percent of profit (based on cost) 20 years ago? Now? 2. Percent of profit is one of the factors that the cost accountant must take into consideration in marketing his recommendation. What other factors might be considered?	5e.1 Recalling Differences Similarities Concluding	5e.1 Math Social Studies		5e.1
5f. The student will be exposed to and engaged in the exploration of various careers from the job cluster Consumer and Homemaking.	5f.1 Tour the Home Economics and Interior design departments that are part of our school facility.	5f.1 Observing	5f.1 Math		5f.1

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
5g. Each student will select, at least one, career fro any of the six previously stated job clusters and construct a mathematical application as related to that career.	5g.1 Students' papers (those constructed in terms of mathematical applications will be selected. The author of the paper will become a member of a panel. The instructor will serve as a moderator for the panel. Each student on the panel will report his application to the class and the class will have the opportunity to question the panel members. The panel member should be able to expand upon and field most any question concerning his application.	5g.1 Making Choices Questioning Anticipating Observing Recalling	5g.1 Math Science Social Studies Language Arts		5g.1

PRE AND POST TEST UNIT II

1a. In the following, rewrite the subtraction problems as an addition problem and then simplify:

1) $-7 - (-7)$

2) $7-12$

3) $3/4 - \frac{1}{2} - 1/6$

4) $12 - 14.9 - 3.3$

5) $16 - (-3) - 5$

6) Subtract 21 from 12

7) Subtract: -6

$$\frac{-6}{(-\frac{1}{4})}$$

8) $-5/8 - 3/4 - (-\frac{1}{4})$

1b. Perform the operation addition on the following polynomial expressions:

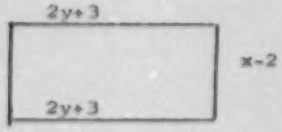
1) $(4a-3b+5c) + (8a+5b-9c)$

2) $(4x+3y+z) + (6x+9y+5z)$

3) Add:

$$\begin{array}{r} 6p-4t+x \\ -7p+8t+6x \\ \underline{-\ p-4t+7x} \end{array}$$

4) Find the perimeter:



5) $6(2+5) + 7(4+a)$

6) $(a+2b) + (3b-4c) + (5a-7c) + (3b+2d)$

7) Find the perimeter:

8) $\frac{1}{2}(4x+7) + (3/2+5x)$

1c. Perform the subtractions for the following polynomial expressions:

1) $(3a+4) - (2a+9)$

2) $(7b-5) - (10b - 8)$

3) $(2x^2-4) - (x+2)$

4) Subtract: $a-b+c$

$$\underline{a+b-c}$$

5) From $x^2-2xy+y^2$ take $x^2+2xy+y^2$

6) Subtract $6x^2-3xy+y^2$ from $8x^2+5xy-y^2$

7) $(5y^2+7) - 1/6(12y^2-24)$

1d. Perform the indicated divisions:

1) $-5n^5 \div 5$

2) $-24a^3 \div -6$

3) $1/3(12x^2y) (-\frac{1}{2})$

4) $x \cdot 1/x = ?$, when $x \neq 0$

5) $-5 \div (-\frac{1}{4})$

6) $-10 \div 0$

7) $\frac{-8a^2b}{-2}$

1e,f. Solve each of the following equations showing the transformations necessary to obtain the solution: Domain is R.

1) $x-6=-2$

2) $-6x = 54$

3) $3-2y = 9$

4) $6x+5 = 17$

5) $\frac{2a}{3} = 4$

6) $3(2x+1) = 10$

1e,f. continued

7) $74-2(35+2x) = -12$
8) $\frac{1}{4}y+6 = -8$
9) $-35 = 5x+2x$

1g. Write an equation that describes the problem situation. Then solve the equation.

1. The sum of the degree--measures of two angles is 90°. If the measure of one angle is 18 degrees less than that of the other, what is the measure of the larger angle?
2. Together a jacket and a pair of slacks cost $32. If the jacket costs three times as much as the slacks, how much did the slacks cost?
3. Five less than twice a certain number is 7. Find the number.

1h. Solve. The domain of each variable is the set of real numbers.

1) $5x = 3x+8$
2) $8y-6 = 2y+24$
3) $4p = -(18-p)$
4) Solve the formula $2s = a+l$ for l.

2a. The two real numbers x and y are such that $x > y$. Replace each ___?___ with one of the symbols $<$, $=$, $>$ or so that the resulting statement is true for all real values of the variable.

1) $y __ x$
2) $x+3 __ y+3$
3) $x-7 __ y-7$
4) $-x __ -y$
5) $3x __ 3y$
6) $-7x __ -7y$
7) $0 \cdot x __ 0 \cdot y$

2b. Write an indirect proof for the following assertions.

1. If $7 = -4+3y$, then $y \neq 4$
2. In $\triangle ABC$, the measure of $\angle A = 62^{\circ}$, the measure of $\angle B = 48^{\circ}$, therefore the measure of $\angle C$ cannot be 80°.

2c. Find the solution set for each of the inequality statements. The domain of each variable is the set of real numbers.

1) $3x-7 < 11$
2) $1-3n > 7$
3) $2x-3 < 7$
4) $4x+3 \leq 2x-5$

2d. Solve and graph each compound sentence. That is, graph the solution set of the compound sentence.

1) $1 < 4+y \leq 7$
2) $4+x < -1$ or $-2+x \leq 1$
3) $-3 \geq x+1$ and $x+13 \geq 7$
4) $\{y : y \geq -6\} \cap \{y : y > 1\}$
5) $\{z : z > -1\} \cup \{z : z < -3\}$

2f. For each of the open sentences that follow, determine the solution set over the set of real numbers and draw its graph.

1) $|x-2| \leq 5$
2) $|z-5| = 3$
3) $|5-2y| > 3$

2g. The following set of verbal problems contains both solvable and unsolvable problems. Study them carefully and if you feel it is unsolvable, give your reason. Those that can be solved must have the unknowns identified, the equation given and the method of solving.

1. Three consecutive odd integers have a sum of 141. Find the smallest of the three.
2. Find two consecutive even integers whose sum is 31.

2g,h. continued.

3) The average rate of speed of one automobile on a recent trip was 10 miles per hour more than that of a second automobile. If it took the slower automobile 10 hours to cover the same distance that the faster one covered in 8 hours, what was the average rate of speed of each automobile?

4. For the annual class play, adult tickets cost one dollar each and student tickets cost 25 cents each. If 220 tickets were sold in all, how many students tickets were sold?

5. Fran has dimes and quarters in her wallet. The number of dimes is six more than the number of quarters. How many dimes does the wallet contain if the total value of all coins is $2.35.

6. If one side of a square is increased by 5 feet and an adjacent side is decreased by 7 feet, a rectangle is formed. The perimeter of the rectangle is 68 feet. What is the length of a side of the square?

3a. Find the solution set using the specified replacement sets.

1) $y=4x-2$ XE $\{-2,0,2\}$ YE R
2) $2x-y=5$ XE $\{-2,0,2\}$ YER
3) $y+1>x$ XE $\{-1,2\}$ YE $\{-3,0\}$

3b. Locate each of the points on a coordinate plane.

1) (2,3)
2) (-6,1)
3) (0,0)
4) (7,0)
5) (-4,-5)
6) (0,-8)
7) (10,0)
8) (7,-5)

3c. Draw a graph for each of the given linear equations.

1) $-3x+y=1$
2) $2y+3x=9$
3) $15+y=2x$
4) $\frac{1}{2}y+3x=4$

3d. Draw the graph for each linear inequality and shade the region that is the solution set.

1) $-5x-2>y$
2) $5y+2x\leq 7$
3) $y\geq 7$
4) $x<10$
5) $2x+3y-8\leq 0$

3e. Determine the slope of the line that connects the given points:

1) (2,1) and (-3,6)
2) (5,4) and (-2,4)
3) (0,5) and (-3,1)
4) (1,8) and (1,-10)

3f. Draw a graph for each of the following that includes the given point and given slope.

1) (4,2) and slope of 5/3
2) (-3,5) and slope of 4
3) (0,0) and slope of $-\frac{1}{2}$
4) (4,5) and slope of 0
5) (-3,-2) and no slope

3g. Give the slope and y-intercept for each of the following equations. Do not draw the graph to find this information.

1) $y=7x-4$
2) $5y+x=10$
3) $3x-y+1=0$
4) $2x+y=6$
5) $8=2y+6x$

3h. Determine an equation of a line using the information given in each of the following problems.

1) Point (0,6)
   m=-2
2) Point (2,-5)
   m=3/2
3) Points (2,1) and (-3,6)
4) Determine the equation of the line that passes through the point (3,5) and has the same slope as the graph of $3y=2x+4$.

4a,b. Graph each system of equations and give the solution set and tell whether the system is consistent or inconsistent.

1) $x+2y=7$
   $4x-y=1$

2) $2x+y=6$
   $x-3y=10$

3) $y=-2x+3$
   $y+2x=-2$

4c. Use the linear combinations method to solve each of the following pairs of equations.

1) $2x+5y=17$
   $-4x+y=-1$

2) $2x-3y=2$
   $3x-2y=8$

3) $2x-5y=14$
   $x+y=0$

4d. Use the substitution method to solve each of the following pairs of equations.

1) $x+y=4$
   $x=4+y$

2) $3x+y=5$
   $2x-3y=7$

3) $y=2x-7$
   $y+3x=13$

4e. Solve each of the following "verbal" problems by constructing a pair of equations in two variables and then finding the solution.

1. The sum of two numbers is 20. Their difference is 30. Find the numbers.
2. A man invested $2500, part at 4% and part at 5%. His total annual income was $110. How much did he invest at each rate?
3. With a tail wind, a jet plane flew 1430 miles in 2-1/5 hours, but it required 2-3/5 hours for the return trip against the wind. Find the airspeed of the plane and the wind speed.
4. Two years from now, Jim will be twice as old as Joe will then be. Ten years ago, Jim was five times as old as Joe was. Find the present age of each person.
5. A store sells two kinds of fountain pens, one kind at $4.50 and the other kind at $7.00. During a month when its pen receipts were $110, it took in $2 more from sales of the more expensive pens than from sales of the others. How many of each kind were sold that month?
6. A barge can go 6 miles up a river in 2 hours. If the same barge tried to proceed up a river with a current three times as great, the barge would require 6 hours to cover 6 miles. Find the rate of the barge (in still water) and the rate of the current of the first river.

4f. For the following system, answer four questions.

$x \geq 0$
$y \geq 0$
$3x+7y \geq 24$
$4x+y \geq 7$

a) Find the solution set by graphing (shade the region showing the intersection of all sets).
b) Write the coordinates of the corner points.
c) Evaluate the expression $5x+10y$ at each corner point.
d) Write the minimum value over the shaded region.

CAREERS PRE AND POST TEST

I. Given a list of jobs related to electricity.

II.a. Participants will put jobs together in groups based on relationships they see among the items.
b. Participants will give reasons for their grouping by identifying the relationships they have listed.

III.a. Participants will suggest appropriate labels or titles for the relationships used to form the group.
b. Participants will give reasons as to why they think the labels are appropriate.

POSSIBLE LIST (I)

Lineman	Foreman or Linecrew	Office Worker
Electrician	Truck Driver	Pole Truckdriver
Repairman	Appliance Repairman	Poled Inspector
Meter Repairman	Inspector	Transformer Installer
Meter Installer		" Repairman
		Street Light Repairman
		Traffic Signal Repairman

II.a. Which of the jobs listed above can be grouped together because they are alike in some way?

Group 1	Group 2	Group 3

b. Give one reason as to why you put each group together.

Group 1 Reason:	Group 2 Reason:	Group 3 Reason:

III.a. Thinking of the reason you put each of the groups together, what would be a good name for each group:

Group 1 Name:	Group 2 Name:	Group 3 Name:

III.b. Why do you think this is a good name:

Group 1 Reason: Group 2 Reason: Group 3 Reason:

Repeat III a. and b. for other possible names and reasons.

Group 1 Group 2 Group 3

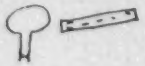
****

UNIT 2 -- SCIENCE -- A STUDY OF ELECTRICITY
PRE AND POST T ST

1. Define static electricity by describing its properties.

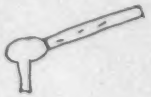
2. Using a diagram of an ebonite rod and a piece of fur, explain in terms of electrons what happens when they are rubbed together.

3. Given the following diagrams of a negatively charged ebonite rod and an electroscope, indicate and explain what happens:
a. when the negatively charged rod is brought near the electroscope,
Draw the leaves and show the charge on them. (a-c)



b. when (1) the negatively charged rod touches the electroscope and (2) is removed.

(1) (2)



c. when (3) the negatively charged rod is brought near an electroscope that is grounded and (4) the ground and rod are removed.

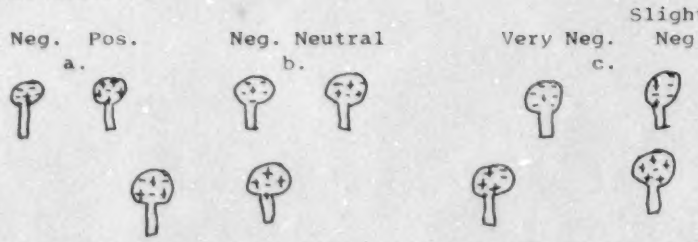
(3) (4)

4. _____. Which of the following statements about how a particle can become charged are correct?
   (a) a particle becomes positively charged by gaining protons.
   (b) a particle becomes positively charged by losing electrons.
   (c) a neutral particle becomes negatively charged by losing protons.
   (d) a negatively charged particle becomes a neutral particle by losing electrons.

5. For each of the following pairs of objects use arrows to show the potential movement of electrons between objects.

(see next page)

5. continued...



6. Use "c" for conductor and "I" for Insulator to classify the following substances used in the electrical industry.

___copper	___aluminum	___plastic	___wood
___glass	___tungsten	___rubber	___porcelain (ceramics)

7. Write a paragraph describing current electricity in terms of electrons. Distinguish between static electricity and current electricity.

8. Differentiate between an electric generator and a storage cell as a source of an electric current.

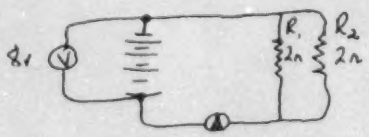
9. Given the following simplified diagrams of alternating current and direct current generators, explain how they generate electricity and how AC and DC electricity are different.

10. Explain how the Columbus and Southern Ohio Electric Company produces and delivers electricity to homes and businesses in the Grove City area.

11. Define the following:
    a. Coulomb
    b. Ampere
    c. Ohm
    d. Volt
    e. Ohm's law

12. Diagram an explanation of how an ammeter and a voltmeter should be connected into a circuit.

13. Fill in the information for each circuit below its diagram.



a. Open or closed	_____	_____
b. series or parallel	_____	_____
c. total voltage V	_____	_____
d. total resistance R	_____	_____
e. Current A	_____	_____

14. List three factors which affect the resistance of a conductor and explain how.
    a.
    b.
    c.

15. Explain why and how fuses and circuit breakers are used.

16. A television set plugged into a 120 volt circuit draws 1.5 amperes. Electricity costs $.03 per kilowatt-hour. Compute the cost of operating the TV for ten hours.

    Answer_____

17. Compute the current in amperes when 200 coulombs of electricity flow past a point in a circuit in ten (10) seconds.

    Answer _____

18. Compute the resistance of a toaster if a current of 10 amperes passes through the toaster when on a 120 volt line.

    Answer_____ What is the power rating of the toaster? _____

UNIT 2 -- SCIENCE -- A STUDY OF ELECTRICITY

GOAL: I. The student will learn what electricity is and how it is generated, transported and used.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
IA. The student will define static electricity and will describe its properties. IB. Given an ebonite rod & piece of fur, the student will explain, in terms of electrons, what happens when they are rubbed together. IC. The student will diagram and explain, in terms of electrons, what happens when a negatively charged ebonite rod is brought near an electroscope. Then explain what happens when the ebonite rod touches the electroscope. ID. Given a diagram of an electroscope that is grounded while a negatively charged ebonite rod is near it, the student will diagram and explain how the electroscope can be charged by induction. IE. Given statements about how a particle can become charged, the student will indicate those that are correct.	IA.1 The concept of statie electricity will be presented through the lecture method with utilization of demonstrations and a question and answer period. Hand out dittos No.8 "Static Electricity" and No.9 "Attraction & Repulsion of Charges" taken from Magnetism and Electricity, St. Louis: Milliken Publishing Co. Instruct the students to complete the diagram.	IA.1 Observing Recalling Differences Generalizing Questioning Make Choices		IA.1	
	IA.2 Optional demonstrations using the Van de Graff generator can be done as follows: a. the accumulation of a large static charge on a sphere; b. the retention of the charge when the machine is not running; c. the grounding of the sphere to remove the static electrical charge; d. the charging of other objects by contact, and e. the charging of other objects by induction.	IA.2 Observing Infer Causes Infer Effects Concluding Questioning			
	IB.1, IE.1 The concept of electrical attraction and repulsion will be presented through the lecture method with utilization and demonstrations and class discussions. Have two or three students help with the demonstrations. Suspend a rubber balloon from a support rod. Rub the balloon with a wool cloth or piece of fur. Rub a hard rubber rod or ebonite rod with the same cloth or fur. Bring the rod close to the balloon and ask the students to explain what happens. Diagram an explanation of what happens on the board. Repeat the procedure using a glass rod and a piece	IB.1 Observing Infer Causes Infer Effects Concluding Questioning Anticipating	IB.1 Art	IB.1	

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	IB.1, IE.1 continued of silk. Provide the supplies so the students can do the same things. Use the overhead projector and transparencies from Magnetism and Electricity to review dittoes 8 & 9.				
IF. Given five diagrams of pairs of charged objects, the student will use arrows to show the potential movement of electrons between the objects in each pair. IG. The student will use the terms "conductor" and "insulator" to classify some of the substances used in the electrical industry.	IC.1, ID.1, IE.2, IG.1. A demonstration and class discussion will be used to study the use of the electroscope to detect the presence of small static electrical charges. Ask the students what is meant by the terms, conductor and insulator? Hand out ditto No.10 "Conductors and Non-Conductors". Demonstrate the charging of the electroscope by contact and by induction. Diagram each situation on the board. Put up a display of electrical conductors available from the industrial arts laboratory.	IC.1 Observing Recalling Classifying Infer Causes Infer Effects Concluding Questioning Anticipating Make Choices	IC.1 Art	IC.1	
IH. The student will write a paragraph describing the concept of current electricity in terms of electrons. He will distinguish between current electricity and static electricity.	IF.1. The concept of charged bodies and electromotive force (emf-Voltage) will be presented through a lecture-demonstration method. Explain the movement of electrons from one object to a more positive object using diagrams on the board. Demonstrate and explain the charging and use of condensers. Discuss problems encountered with the presence of static electricity in machines, computers and elsewhere (lightening).	IF.1 Observing Infer Effects Generalizing Questioning			
II. Given a diagram of a storage cell (voltaic cell), the student will describe how it provides electricity and indicate the	IH.1, II.1, IJ.1. The concept of current electricity will be presented through the lecture-demonstration method with the utilization of worksheets, movies and question and answer periods. Hand out dittos No.11 "Current Electricity" and No.12 "Wet and Dry Cells" from	IH.1 Observing Recalling Concept Testing Questioning	IH.1 Art Math Social Studies	IH.1	

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION SHIP	AFFECTIVE RELATION SHIP
II. continued... direction of flow of electrons and current between electrodes. IJ. Given simplified diagrams of alternating current and direct current generators, the student will explain how they generate electricity and how AC and DC electricity are different. IK. The student will write an explanation of how electricity is generated and delivered to factories and home.	IH.1 continued... Magnetism and Electricity, St. Louis: Milliken Publishing Co.. Use the transparencies for Noll and No.12; use the overhead projector to review the handouts. Demonstration: Show the generation of an alternating electric current (AC) by using a U-magnet, several loops of insulated wire, and a demonstration galvanometer. Draw diagrams of the circuit, electron flow on the board. Demonstration: Show the generation of a direct electric current (DC) by using a voltaic cell, insulated wire, and galvanometer. Draw diagrams of the circuit, electron flow, and current flow on the board. Show the movies "Principles of Electricity" (20 minutes, color) and "Fundamentals of AC and DC Generation" (24 minutes, color) available from The Columbus and Southern Ohio Electric Company (614)2286411, Ext. 365. For additional study have the students go to the IMC and look at the filmstrips No.621.4 "Power Sources of the Future" and No.537 "Electric Fields". IK.1 How electricity is generated and delivered by electric utility companies to customers in the city will be presented by utilizing a speaker from the local electric company and a class discussion.	IK.1 Observing Questioning	IK.1 Social Studies		25.

OBJECTIVES	IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	1K.1 continued... Home wiring blue prints will be displayed. Students will be taken on a guided tour of the building to see parts of the electrical system. Show one or more of the following movies (may be shown in the IMC area): "Ever Since Edison" 25 minutes, color "Generating Electricity" 24 minutes, B&W "Twins on the Ohio" 25 minutes, color "Amber, Atoms, and Accidents" 25 min., color "Electric Power and Common Sense" 25 min.,color				
GOAL: 2. The student will learn how to use electrical meters and the principles of electricity to solve electrical problems.					
2A. Given batteries, wire, switches, lightbulb sets, the student will construct a series circuit and a parallel circuit. He will draw a diagram of each circuit indicating the resistors (R) switch, power supply (V), flow of current (I), and flow of electrons (Q) 2B. The student will define (a) coulomb, (b) the ampere, (c) the ohm, (d) the volt, and (e) Ohm's Law.	2A.1, 2B.1, 2C.1, 2E.1, 2F.1, 2I.1. The concept of electrical circuits, use of electrical meters and the application of principles of electricity to solve problems will be presented through the use of lectures, demonstrations, discussions and simulations. Hand out dittos No.13 "Batteries", No.15 "The Pathway of Electricity - Circuits", No.16 "Series and Parallel Circuits", No.17 "Switches and Fuses" and No.18 "The Electric Motor" taken from Magnetism and Electricity. St. Louis: Milliken Pub. Co.. Instruct the students to complete the dottoed worksheets as the information is covered. The parts of a simple electrical circuit, how circuits enable us to control electrical energy, what Ohm's Law is, and how Ohm's Law operates in a circuit will be presented by	2A.1 Observing Recalling Infer Effect Questioning Anticipating	2A.1 Math Art	2A.1	

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
2C. The student will diagram an explanation of how an ammeter and voltmeter should be connected into a circuit. 2D. Given diagrams of several different circuits the student will label them as open or closed and series or parallel. The student will calculate and fill in the total voltage (emf), resistance, and current of each circuit. 2E. The student will list and explain the factors which affect the resistance of a conductor. 2F. The student will explain why and how fuses and circuit breakers are used. 2G. Given the current & voltage rating for an electrical appliance and the cost of electricity per kilowatt-hour, the student will calculate the cost of operating the appliance for a number of hours.	2A.1 continued... showing filmstrip No.621.31 "Elements of Electrical Circuits". Draw diagrams of some of the electrical circuits using the proper symbols for the power supply, resistors, swithes, and the meters used. Point out how ampere meters, volt meters and Ohm meters are hooked into a circuit and how they are read. 2A.2, 2B.2, 2C.2, 2D.2, 2F.2, 2H.1, 2I.2. The fundamentals of series and parallel circuits the relation of simple circuits to the use of household devices, and the terms commonly used in working with electrical circuits will be presented by showing the filmstrip No.621.31 "Series and Parallel Circuits". Draw diagrams of some of the circuits using electrical symbols. Work sample problems using Ohm's Law. 2A.3, 2D.3, 2E.3, 2I.3. <u>Simulations</u> The student will receive practical experience in wiring series and parallel circuits by carrying out the following exploration and simulation experiments using the "Electric Circuit Unit" supplied by Science Kit, Inc., Tonawanda, N.Y. Exploration 1: Lighting a Bulb " 2: Testing Connections " 3: The Battery Holder " 4: Enlarging the Circuit " 5: Finding Conductors and Insulators " 6: Preparing the Switch " 7: Two Kinds of Circuits Instruct the students to draw a diagram of each circuit constructed and to answer the questions.	2A.2 Observing Recalling Infer Effects Questioning Anticipating 2A.3 Observing Recalling Classifying	2A.2 Art Math 2A.3 Art	2A.2 2A.3	

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
2H. The student will solve correctly six out of ten electrical problems. 2I. The student will use and explain the operation of electric generators, electric motors, electric lights, fuses and circuit breakers, electromagnets and solenoids, transformers, ammeters, voltmeters, galvanometers, and kilowatt-hours meters.	2A.4., 2D.4, 2I.4. Simulations The student will receive practical experience in following instructions and wiring diagrams by carrying out the following exploration and simulation experiments using "Electrical Experiments" supplied by Science Kit, Inc. No.1 Signal Only No.2 Bell Only No.3 Motor and Bell No.4 Motor and Lamp No.5 Bell and Lamp No.6 Motor Only Instruct the student to draw a diagram of each circuit and to answer the questions. Instruct the student to use available meters to measure the voltage and current of the circuits at various locations.	2A.4. Observing Recalling Make Choices	2A.4 Art Math	2A.4.	
	2A.5, 2E.5, 2I.5. The electric utility system, alternating current circuits, inductance and capacitance will be presented by showing the filmstrip No.621.31 "Alternating Current Circuits" frames 1-30.	2A.5. Observing Recalling Questioning			
	2F.3, 2G.1., 2I.5. The basic principles involved in home electrical appliances, and minor repairs for keeping appliances in good working order will be presented by showing the filmstrip No.644 "Home Electrical Appliances". Then the concept of electric power will be presented using the lecture method followed by a question and answer session. Ask the students to look at the appliances and electrical fixtures in their home or shop and make a list of the current, voltage, and power rating of five of them. Use this information to work sample problems calculating the cost of electricity used. Have students work some electrical problems for exercise.	2F.3. Observing Recalling Questioning Make Choices	2F.3. Math		

Goal. 3. The student will explore the careers in the electrical industry.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
3A. The student will list two careers in the electrical industry and give the training requirements, working conditions, need skills, job requirements, union requirements, availability of jobs and pay.	3A.1 Ask the students the question "What specific careers in the electrical industry can they name. List the careers on the chalkboard or large sheet of paper as the students name them. Then ask the students to group the careers according to some way in which they are alike. After grouping, have the students give the reason for putting the careers into a group and then decide on a label or name for each group of careers. Divide the class into small groups to give reports on the groups of careers. Encourage the students to use the audio-visual materials on careers. Have speakers in from some of the following places to talk about careers in the electrical industry. a. Columbus & Southern Ohio Electric Co. b. A home or industrial electric company, e.g. Westgate Electric Company c. A large appliance repairman d. A small appliance repairman e. An electric motor repairman f. An electronics teacher (Tech School) Available filmloops in Room 1003 "Electricians" "Assembly Occupations (Electronics)" "Customers-Service Occupations (Electric)" "Power Industry" "Electronics Technician" "T.V. and Radio Serviceman"	3A.1. Recalling Similarities Grouping Concept Label Classifying Questioning Make Choices	3A.1. Social Studies Speech	3A.1.	3A.1.

SOCIAL STUDIES CAREER PRE-TEST

I. Make a list of at least ten careers that you think would be classified as being crucial to operation of city government, and state your reasons for your choice.

II. From the list of career clusters, identify at least one career from each cluster that is oriented toward an economics related activity.

III. Make a diagram of the relationship between the government officials (beginning with the mayor, city manager or council) and the various supportive occupations needed for the maintenance of public services in a community (Example: safety director -- police chief -- ranking officers -- police).

IV. Describe several problems related to urban areas that a political scientist and economist would be each concerned with.

****

TEST ITEMS

1. Match the following Urban problems to its source:
   a. Housing, Sanitation. _____
   b. Revenue needed for services. _____

   1. Financial Crisis
   2. Population Growth

2. Explain the effect of the following problems caused by the population explosion of the past 30 years on the cities of America.

   1. Density of Population
   2. Delinquency.
   3. Political Corruption
   4. Disease.
   5. Poverty.
   6. Decline in Municipal Services.

3. List and explain the 3 factors that caused people and industry to leave the cities in recent years.
   Example: Asthetics -- cities have become of high taxes, problems of safety and crime, and reduced municipal services.

4. Circle the people or race that stayed behind and took the place of those that left the cities. List 5 reasons that those people or race stayed.

5. List the causes of the cities financial crisis.
   Match the following:

   a. Homeowners paying $1,200 on their homes. _____
   b. Jobs unfilled. _____

   1. Decline in municipal services.
   2. Raising property taxes.

6. Match the following descriptions to the paper functions or service:

   a. Snow removal, repairing bridge, lighting _____
   b. Police department, fire department _____

   1. Maintenance of Public Safety.
   2. Sheet Maintenance.

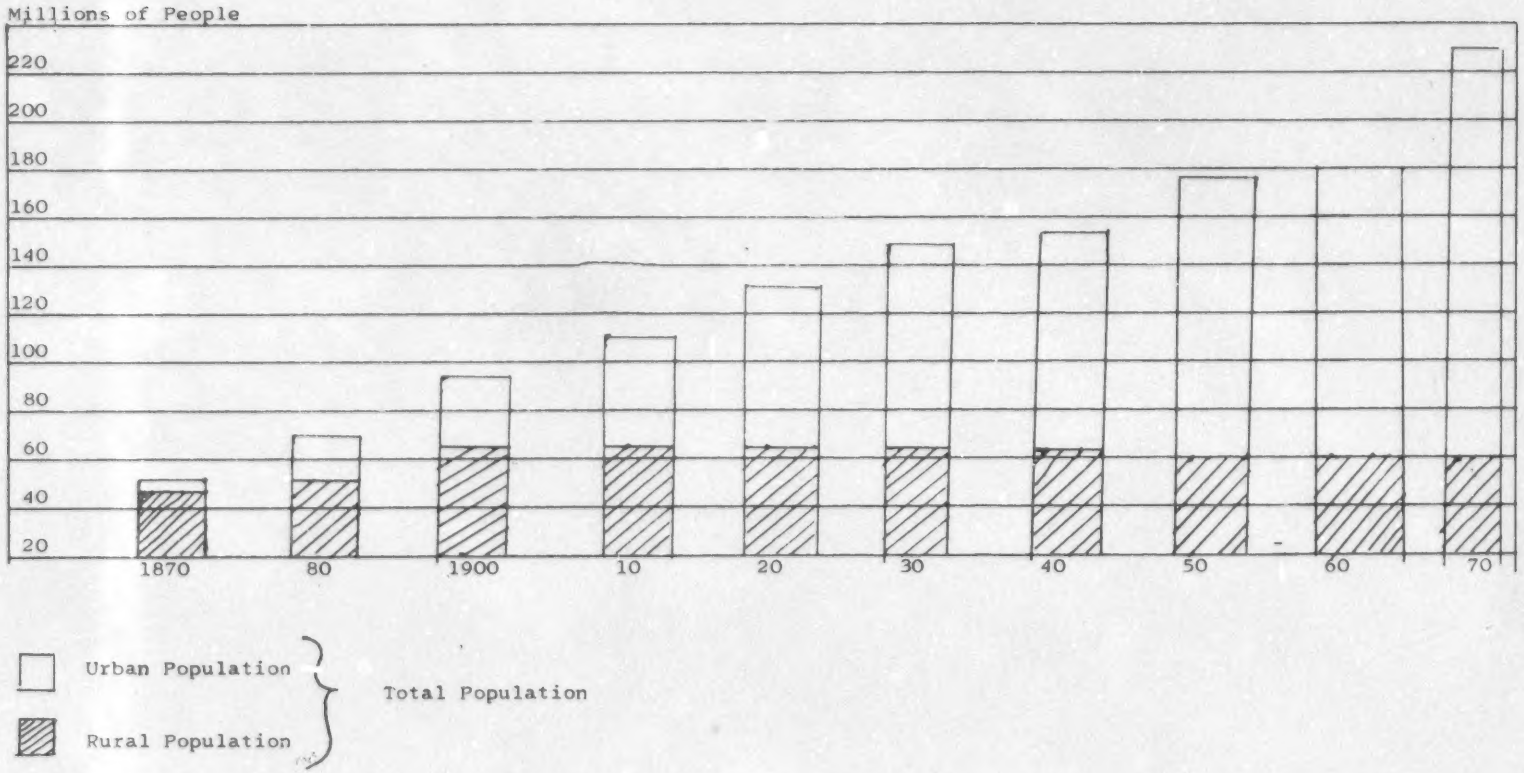
T4

SOCIAL STUDIES: PROBLEMS OF URBAN GOVERNMENT

GOAL: To determine the character of present-day cities, explore many of the pressing problems confronting cities and then review possible solutions to remedy the more urgent problems.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
1. Student will be able to identify 5 sources of urban problems.	a. The students will trace the problem of today's city by researching data gathered in the IMC from World War II to the present. For simplicity in compiling and organizing data, the class will be divided into groups with each member taking a 10-year span from 1945 to present day for his research.	a. Observing Recalling Ordering Concluding	a. Math Science		
2. With 80% accuracy, the student will be able to explain the effect of the population explosion of the past 30 years on the cities of America.	a. The teacher will serve as a catalyst to guide learning and also as a co-inquirer with the pupils in drawing upon various sources of data to investigate selected topics, issues and problems. (such as) population growth, pollution and delinquency.	a. Recalling Questioning Anticipating Infer Causes Infer Effects Concluding Generalizing			
3. The student will be able to list and explain 3 factors that has caused people and industry to flee the cities in recent years.	a. The teacher will present to the class the following graphic illustration of the "Continuity and Change of Urban Population". After the chalkboard presentation have the students write the answers to the following questions. 1. At what point did the United States become predominantly urban? 2. Since then, in what decade did the rural population make its greatest advance? 3. What has happened to it more recently? 4. How might that affect urban areas? (Graph to be used is shown on next page.)	a. Observing Recalling Differences Similarities Concluding	a. Math		

GRAPH


Millions of People
220
200
180
160
140
120
100
80
60
40
20
1870
80
1900
10
20
30
40
50
60
70
Urban Population
Rural Population
Total Population

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
4. The student will be able to list 5 reasons why and identify correctly who, in large part, have stayed behind or taken the place of those that left the cities.	a. The teacher will guide discussion, use small group discussion method for raising pertinent questions and utilize the booklets "Poverty and Welfare" and "Poverty in an Affluent Society" for pupil interpretation and generalization. b. The teacher will present, on the chalkboard, the following graph on the Proportion of Blacks in Cities and Metropolitan Areas. Proportion of Blacks in Cities and Metropolitan Areas City — Percentage of City Population — Percentage of Metro. Population Washington 71 25 Newark 54 19 Gary, Ind. 53 18 Atlantic 51 22 Baltimore 46 24 Detroit 44 18 New Orleans 45 31 Wilmington 44 12 Birmingham 42 30 Richmond 42 25 St. Louis 41 16 Memphis 39 38 (In the 67 largest Metropolitan Areas) National 23.3 4.5 c. The teacher will show further demonstration the dilemma and plight of poor people by utilizing the ghetto game.	a. Questioning Recalling Infer Effects Infer Causes Concluding Generalizing b. Observing Infer Causes Infer Effects Concluding c. Observing Infer Causes Infer Effects Concluding Make Choices	a. b. Math c.		a. c.

OBJECTIVES	IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION SHIP	AFFECTIVE RELATION SHIP
5. With 70% accuracy, the student will be able to list causes of the financial crisis of the cities and match 2 methods used to combat the crisis.	a. The teacher will invite a resource person preferably a city official who will discuss the financial problems and methods of resolving those problems of the cities.	a. Observing	a. Math		
6. The student will be able to identify with 75% accuracy the essential functions or service performed by the city.	a. The teacher will choose a class committee to find out from their city officials at city hall what services are performed by that city.	a. Questioning	a.		
7. Based on information gathered from fact-finding committees the student will be able to in the form of a debate resolve the following questions: 1. Is the general property tax fair? 2. As a rule are assessment policies reasonable? 3. Do renters pay their share of taxes? 4. How do property tax rates affect business?	a. The teacher will invite a local tax accessor to speak to the class and answer questions concerning property taxes and other sources of local revenue. b. The teacher will bring a property-tax bill to class and show how the tax is calculated (assessed valuation X (multiply) tax rate= property tax. c. The teacher will choose a class fact-finding committee. It should find out from a municipal official suggested by the teacher what are the chief means by which your city (Columbus) is legally authorized to raise money. It should also discover what approximate per cent each method contributes to the city's total revenue, or income. Based on the committee's reports, each class member should then draw a circle graph (pie chart) of the city's revenue sources indicating the major revenue and expenditures categories.	a. Observing Questioning b. Observing c. Questioning Ordering Similarities Differences Making Choices Anticipating	a. Math b. Math c. Math	c.	c.

GOAL: II. To develop responsible citizenship encourage critical thinking and ability to express ideas, the acquisition of analytical skills and competencies essential for affective living, and the appreciation of the basic values underlying our way of life.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
1. The student will be able to distinguish between the three major types of city government: the mayor-council, the commission, and the council-manager forms. a. State the advantages and disadvantages of each.	a. Using encyclopedias in the IMC area the students will write a paper comparing the advantages and disadvantages of the three forms of municipal government. b. Choose a class committee to find out from officials at your city hall what form of government your city has. c. Each member of the class will write a job description and a Task Listing Sheet (duties) of the major officials of your municipal government. d. The teacher will assign reading in the booklet "Law and the City", "Justice in Urban America", Houghton Mifflin Co. e. For student observation the teacher will secure the following films, "The Mayor", Encyclopedia Brittanica Educational Corp., 1150 Wilmette Avenue, Wilmette, Illinois 60091; Local Government and Politics same as above.	a. Recalling Making Choices Concluding b. Questioning c. Making Choices Ordering Concluding d. Recalling	a. b. c.		
GOAL: III. To develop an awareness of how our cities are structured, how the legal process works, and how individual rights and obligations are interrelated.					
1. The student will be able to write a job description and if ask Analysis (duties, functions) of the below occupations and careers.	a. The student will research the pertinent data by utilizing the Career Resources in the IMC (i.e. taped interviews, SRA Occupational and Directory Briefs, Occupational Outlook Handbook, etc.) b. The student will make an oral presentation to class on one of the above careers. For the presentation the student will use appropriate taped interviews or information gained from an actual interview (personalized or through written correspondence) with one of the persons bringing into light the personal experience of that person.	a. Making Choices Concluding b. Questioning Making Choices Concluding	a. b.		

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
2. The student will be able to explain the functions of these municipal courts: Police, domestic relations, small-calims, juvenile, traffic.	a. Mock Trial -- The teacher will use the following simulation procedure. This procedure is adapted easily for the trial of Nebbia vs New York (or hypothetical cases originated by students and teacher. The following participants will be chosen: a) judge, b) plaintiff's attorney, if it's a civil case or prosecutor if it's a criminal case, c) defendant's attorney, d) plaintiff, or in a criminal case, the victim complaintant if one is needed, e) defendant, f) clerk of court reporter, g) court reporters, h) bailiff, i) witnesses for the plaintiff or prosecution, j) witnesses for the defense and k) panel jurors. The teacher will define the roles and the participants will learn their roles. With help of the clerk and alternate clerks, the teacher will prepare the written transcripts of testimony for each witness. The teacher will brief the class on the procedures and conduct of the trial.	a. Observing Recalling Concluding Making Choices	a.		
	b. Sixteen MM films will be used for student observation and for posing pivotal questions. "Story of a Trial" -- Film Associates of California, 1159 Santa Monica Blvd., Los Angeles, California 90025. "The Judicial Process-Trial by Jury" -- Univ. of Washington, Seattle, Washington 98105.	b. Observing			
	c. The purpose of this activity is to challenge students to seek and evaluate pertinent data. The teacher should not hesitate to recount personal experience, humorous episodes, or	c. Recall Infer Feelings Infer Causes Infer Effects Concluding			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	c. continued. touching encounters with people living within the community provided the precaution is taken to withhold names or other information that could be used to identify the actual persons involved. For example: the teacher who has served on a jury might describe to the class the procedures involved and the feelings he had as he decided the fate of the defendant. If the teacher has not served on a jury, he can invite a resource person for this activity.				
3. The student will be able to identify the shortcomings of fragmented metropolitan government and be able to list, then evaluate the five proposals for coordinating the operations of communities within a metropolitan area.	a. The teacher will assign Chapter 2 of the "Law and the City", Haughton Mifflin Co., for reading. This chapter deals with the urban sprawl, checkboard control and attempt remedies to overcome the weakness of metropolitan governments. After completion of the reading assignment, the teacher will direct a discussion by posing pivotal questions. b. To show how fragmental urban government affects its residents, the teacher, with aid of an opaque projector and the photograph on page 35 of "Law and the City" will illustrate the problems that urban dwellers face. The teacher will motivate the student analysis of the photograph by asking such questions as "What events may have led to the scene shown here?", "What is the mood of the person, as evidenced by expression of his arms?". c. The teacher will duplicate and hand out to each class member a copy of Case Analysis 8, "Governing Urban Areas" found in the book "American Government", Houghton Mifflin Co.	a. Recalling Similarities Differences Concluding b. Observation Infer Causes Infer Feelings Concluding			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	c. continued The class will then be divided into small groups and ask to conduct "buzz" sessions dealing with questions prepared by the teachers that analyzes the case and the problems of metropolitan areas. The chairman of each group will report the results of the "buzz" sessions to the class for further discussion and evaluation. d. The teacher will invite a municipal government official to discuss the central city's (Columbus) operations and interrelationship with other communities (Bexley, Arlington, etc.), which form a metropolitan area.				

SOCIAL STUDIES PRE AND POST TEST

1. Write an essay entitled "The Ways in Which Economics Affects My Daily Life". The essay should explain how the various facets of economics has some influence or affect on your everyday life. The essay should be well-organized, grammatically correct, and contain no spelling errors.

2. Describe four considerations which you think must be considered when defining poverty, i.e. whether or not a person would be classified as living in poverty.

3. Describe, using specific examples, what the term "chain of poverty" means.

4. Do you think it is possible or even desirable to eliminate poverty in the United States? i.e. to redistribute income and opportunity between the rich and poor in our society. Explain your reasons for your answer.

5. a. In the space below list reasons why cities have been losing money while at the same time needing to spend more money for new and different reasons.

Reasons for loss of income	Reasons for increased spending
1.	1.
2.	2.
3.	3.
4.	4.
5.	5.

b. Chart how you think these two phenomonon would look on a graph. (Approximate relationship of the lines.)

6. Describe what you think the term "consumerism" means. What spets should be taken by a consumer when making a major purchase (t.v., car, radio, etc.)? What do you think would be the results of failure to consider these items?

7. List 5 careers in which economics plays a major role, and describe what that role is.

SOCIAL STUDIES: Economics Unit, Ninth Grade Introduction to Social Studies
GOAL: I To explore Economics as a Social Studies

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
1. Following an introductory lesson on the nature of economics as a social science the student will write an essay entitled "How Economics Affects My Daily Life".	a. Introductory materials will be provided for the students to read to become acquainted with the nature of economics as a social science. The teacher will then discuss with the class the various facets of economics. b. The teacher will use the TABA Strategy of concept development to gather data pertaining to the ways economics affects our daily lives. It is hoped the class will formulate and develop several economics concepts through the use of this strategy, i.e. saving, scarcity, allocation of resources, supply and demand.	a. Observing Recalling Questioning b. Recalling Grouping Concept Labeling Concluding Generalizing	a. Social Studies b. Social Studies		a.
2. Following a study of the career opportunities in economics, the student will write a detailed job description on an economics related career of his choice.	a. The teacher will direct the students to research types of economics related careers available, and to discuss these in class in small group discussions. b. The teacher will use the Taba Strategy of concept development to list the findings of the students and to formulate categories or groups of careers.	a. Recalling Questioning Observing Concluding b. Recalling Grouping Concept Labeling Concluding	a. Social Studies Math Science b. Social Studies Math Science		
GOAL: II. To explore economics as it relates to cities by exploring two urban economic problems.					
1. Following a study of the economic dimensions of poverty, the student will describe the considerations involved in writing an economic definition of poverty by listing and explaining 4 criteria for the determination of poverty levels.	a. Students will be assigned readings and will view a filmstrip concerned with urban poverty. The class will discuss, and the teacher will list on the board, the things the students have read and observed regarding the nature of discussion of the "Chain of Poverty", and the ways the "process of urbanization" has created slum areas, or pockets of poverty.	a. Observing Recalling Differences Similarities Grouping Infer Causes Infer Effects Questioning Concluding Generalizing Infer Feelings.	a. Social Studies		a. 41.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
	b. The students will view statistical data detailing the incidence and effects of poverty in the U.S. These statistics will reflect income, size of family, age and sex of family head, and farm or non-farm residence. Students should be made aware of the omission of social and psychological factors.	b. Observing Similarities Differences Questioning Concluding			
	c. From these activities students should be able to formulate a definition of poverty, including what variables affect the scope of poverty. Readings: Justice in Urban America Series: Poverty and Welfare The Incidence and Effects of Poverty in the U.S. Filmstrip: The American Poor	c. Recalling Concluding Generalizing	c. Social Studies Math		c.
2. Following a study of the theories of the "new economics" and consideration of the phrase "poverty in an affluent society", students will write a 3 page position paper attacking or defending the statement: "Our society must take the necessary steps to eliminate poverty during the '70's."	a. The students will read assignments relating to the ideas of the new economics as proposed by John Galbreath pertaining to the potential of our society to eliminate poverty and other social and economic problems.	a. Observing Recalling Questioning			a.
	b. Students will study present and proposed welfare programs and the class will discuss their strengths and weaknesses as they relate to the problems of poverty. Readings: Economics in Today's World (AEP) and Filmstrip: The Welfare Dilemma (GA)	b. Observing Recalling Infer Feelings Questioning Concluding Generalizing			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
3. The student will display his awareness of the economic concept allocation of resources by charting a graph illustrating the loss of revenue by cities against the increased expenditure due to increased demands for services of cities during the past ten years.	a. Through readings and discussions students will discuss the reasons why the income of cities declines while the demands for services and facilities increases. The teacher will relate this concept to the process of urbanization, i.e. why people move out of cities, why others move in.	a. Questioning Infer Causes Infer Effects Concluding	a. Social Studies		
	b. Students will study the revenues and expenditures of Columbus, with the teacher pointing out the tupes of revenues, and varying types of expenditures. Simulation: Budget Hearing.	b. Observing Grouping Classifying Concluding	b.		
	c. Students will simulate a budget committee hearing of a large, urban area (Columbus). Students will be assigned roles corresponding to officials of the city. They will be expected to research the budget needs of their department, ready to convince others of the pressing needs of their area (Examples: police, fire protection, welfare, streets, parks and recreation, etc.) with the prospect of a limited budget (limited resources, unlimited wants = scarcity) the committee will then deliberate and allocate the resources on the basis of the hearing and deliberation.	c. Observing Recalling Grouping Infer Causes Infer Effects Questioning Make Choices	c. Social Studies Math		c.
	d. Given statistics relating to revenues and expenditures for 10 years in Columbus, the student will chart these on a graph detailing differenc types of revenue and expenditure.	d. Observing Ordering Grouping Concluding	d. Social Studies Math		

GOAL: III. The student will explore the economic implications of "consumerism"

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
1. Students will participate in the simulation "consumer". They will then describe, either written or orally, their observations regarding: -interest rates charged by financial institutions. -credit ratings and its effects on borrowing -the implications of contracts -the mechanics of that sector of the economy concerned with consumer credit.	a. Through reading and discussions, the class will describe the characteristics of the consumer movement, and how this has affected our economy. b. Simulation: "Consumer" Students will participate in the simulation which is intended to teach about the problems and economics of consumer buying. It is intended to encourage proper credit-use strategy based on their own experience and that of other players. Students will weigh costs of financing, opportunity costs of money, and learn to guard against unanticipated events not generally covered by insurance. A discussion will follow the simulation.	a. Observing Recalling b. Observing Ordering Recalling Infer Causes Infer Effects Concluding Generalizing Questioning Anticipating Making Choices	a. Social Studies b. Social Studies Math		b.
GOAL: IV. Students will explore the application of economics concepts to career exploration.					
1. Students will compose a list of 10 careers that interest him, in sequence from highest degree of interest to lowest. For each career listed the student will write a brief description of the type of job performed. Training required, and the approximate salary range. He will then write a description of the ways economics would be used in each job.	a. This activity will involve mostly individual and small group activity for the students, with the teacher providing advice and assistance. Preceding the assignment the teacher will give examples of the ways economics enters most careers (from housewife to bankers) to provide clarification. The teacher will emphasize the job clusters as identified by the State Dept. and illustrate how economics enters some phase of almost all careers.	a. Recalling Ordering Observing Infer Effects Concluding Making Choices	a. Social Studies Math Science Language Arts		a.

LANGUAGE ARTS PRE AND POST TEST FOR CAREER UNIT II

1. See Goal I, Objective 1m Career Unit II.

2. Describe the characteristics of a person you consider a superior conversationalist.

3. What are the chief advantages of being able to converse well?

4. When applying for a job, what are four things you should do before the interview for the job?

5. List all the ways you know of getting a job.

6. List five guidelines to follow when placing or receiving a telephone call.

55

GOAL: I. To understand that listening is an art that can be learned by developing the skills of concentration and observation and listening to the feeling or tone of the voice.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
1. Given a list of questions regarding the attitudes and actions of a listener the student will evaluate his own skill as a listener by answering the questions (pre and post test)	a. The questionnaire will be presented at the beginning of the unit and will point out the individual needs and difficulties on which to concentrate for improvement. The questionnaire is taken from Modern Speech, page 51.	a. Recalling Concluding			a.
2. After hearing a series of either numbers, words, or phrases, the student will answer questions about the series.	a. One question to be included in this exercise is the following: In the series of numbers 7-2-5-4-3, the fourth number is___. This pattern should be followed with all questions. Other questions used can be found on page 467 of Warriner's English Grammar and Composition.	a. Recalling			
3. After hearing ten names the student will write as many of the names as he can recall.	a. Several students can read the lists of names orally while the rest of the class listens and then writes.	a. Recalling			
4. Given a series of directions orally, the student will follow these directions in writing.	a. The student should begin with a blank sheet of paper and should follow directions given by the teacher. Examples of possible directions are: 1. Write your last name in the lower right hand corner, 2. in the upper right hand corner, print your first name.	a. Recalling			
5. After completing textbook, lecture, and discussion materials concerning listening skills	a. At this point in the unit, the material presented in Chapter 4 of Modern Speech should be completed. A short quiz will be given to check for knowledge of skills which will be	a. Recalling Concluding Making Choices			

95

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
5. continued... the student will answer objective questions regarding such skills.	a. continued... used in later activities.				
6. After hearing an oral report, the student will answer in writing objective and subjective questions concerning the report.	a. Written reports prepared by the students during the previous careers unit will be used here. Certain students will read their reports to the other members of the class. The questions to be asked will be prepared by the teacher. These reports covered such information as education needed, working conditions, advantages, disadvantages, and income of jobs chosen by the students, indicating their preferences and interests.	a. Recalling Concluding Generalizing			
7. After hearing two commercials, the student will name the two products advertised (not the brand names mentioned) in fifteen seconds.	a. The students should not be told beforehand the information for which they should listen. b. These commercials are taken from the tape program entitled "Effective Communication: The Art of Listening" (Tape one from Argus Communications)	a. Recalling			
8. After hearing an oral discussion, the student will discriminate between those statements that are true and those that are false regarding the discussion.	a. The discussion is taken from the tape "Effective Communication: The Art of Listening" (tape one from Argus Communications.)	a. Recalling Classifying Concluding Generalizing			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
9. After hearing a duelogue, the student will discuss the main points and the emotional qualities presented.	a. The duelogue is presented on a tape. b. The teacher should impress that just as all hearing is not lietening, so all speaking of two or more people is not dialogue. The failure to listen destroys the dialogue.	a. b. Observing Infer Feelings Concluding Questioning Anticipating Making Choices			a.
10. After hearing three conversations, the student will label each as either a dialogue or a duelogue.	a. These three particular conversations are given on the tape. b. The conversations will be played stopping after each one to 1. take a concensus of the class as to whether the conversation is dialogue or duelogue, 2. discuss the reasons for their opinions, and 3. offer suggestions for turning a duelogue into a dialogue.	b. Observing Recalling Concluding Generalizing Making Choices			
11. After viewing a demonstration of nonverbal communication, the student will discuss the feelings, attitudes and ideas that were expressed.	a. Several students (4 or 5) should be asked to participate in the demonstration while the rest of the class observes. The participants should select a situation that will then be acted out but without the use of the spoken word. The students must use gestures, facial expressions, etc., in order to get their point across.	a. Observing Recalling Infer Causes Infer Effects Concluding Generalizing			a.
12. After selecting a controversial topic (one on which there is no total agreement), the students will discuss the topic in which each speaker summarizes the preceding speaker's remarkes before he continues the discussion.	a. After selection of a topic, the students will discuss the topic in the following manner: after each person makes a statement, the person who speaks next must summarize the preceding person's remakrs to the satisfaction of that person. The discussion cannot continue until this is done each time.	a. Observing Infer Causes Infer Effects Infer Feelings Questioning Anticipating Making Choices			a.

GOAL: II. To develop the ability to participate effectively in person-to-person and group conversation.

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
1. From his study of conversations that he has heard and participated in, the student will make a list of good and bad habits of conversation.	a. Students will analyze the conversational qualities of their friends. They should not mention names. After they have listened to a number of conversations, they will make a list of good and bad conversation habits. The lists will then be discussed in class. Students should decide which qualities are most important for good conversation. They should also determine which qualities are most often absent.	a. Observing Recalling Infer Feelings Concluding	a. Social Studies		a.
2. After reading assigned references, the student will list suggestions that will aid him in confidently participating in a person-to-person conversation and a group conversation.	a. This activity is a follow-up to objective 1a. The students will read the following section from Modern Speech -- Chapter 3, Improving Conversation, pp.22-29. The students will compare this list with their list from 1a. and then form a final list of guidelines for effective participation in conversation.	a. Recalling Differences Similarities Grouping Classifying	a. Social Studies		
3. The students will role play in a specific conversational situation using the guidelines that the class has established.	a. Each situation should last about five minutes. Possible situations may be: 1. Three graduates meet at an alumni reunion after a separation of ten years. 2. Four ladies converse after a PTA meeting. 3. Three girls riding home on the bus are talking about school. One of the girls purposely violates some of the guidelines for good conversation. 4. Four boys talk about the school's athletic achievements of the past year and the possibilities for the coming year. 5. A teacher and a parent meet to discuss the progress of the parent's child.	a. Infer Feelings Anticipating Making Choices	a. Social Studies		

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
GOAL: III. To develop the ability to converse effectively and confidently in social situations.					
1. After reading "Guides for Making Introductions" and "Guides for Responding to Introductions", the student will criticize a group of expressions used in making or acknowledging introductions.	a. Students will criticize the expressions by using the "Guides for Making Introductions" and "Guides for Responding to Introductions" taken from Building Better English, Grade 10, Harper & Row. b. Suggested expressions are as follows: 1."Nice to have met you I'll see you around." 2. "Fred, this is Mary Sullivan." 3. "Well, I have to go, Good by." c. Further reading may be done in Modern Speech, chapter 2, pp.17-21.	a. Recalling Concluding Questioning Making Choices	a. All subject matter		
2. After being assigned to groups, each student will role play in a specific social situation in which an introduction or acknowledgement is necessary.	a. Working in pairs or in groups, students will make and receive introductions. Suggested situations are: 1. Your employer and a friend. 2. Your father and the superintendent of schools. 3. Your assistant manager to your wife or husband. 4. A boy and a girl. b. The activity is taken from Building Better English, Grade 10: Under the direction of a leader, students will take turns introducing two boys, two girls, or a girl and boy. Each time after the introductions and responses have been made, the students will begin a conversation, after visiting briefly, the leader will make an excuse to take one person away so that the ones who have been introduced can demonstrate how to make a courteous parting. Let the rest of the group act as observers, not as part of the company. Students	a. Recalling Infer Feelings Generalizing Anticipating Observing	a. All subject matter		

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATION-SHIP	AFFECTIVE RELATION-SHIP
	b. continued... should be sure to apply the guidelines for good listening, conversations and introductions.				
3. After discussing good and bad telephone manners, students will list guidelines that may be used in evaluating various telephone conversations.	a. Discussion may be based on these topics: 1. telephone habits which are irritating 2. rules of etiquette to use on the telephone 3. examples from your experience of bad telephone manners.	a. Observing Recalling Infer Feelings Concluding Generalizing	a. Social Studies		a.
4. After reading assigned references, the students will list guidelines that will aid them in effectively participating in a telephone conversation.	a. This activity is a follow-up to Objective 3a. The student will read the following section of Modern Speech, chapter 3, pp.32-37. The students will compare this list with their list from 3c., and then form a final list of guidelines for an effective telephone conversation.	a. Recalling Differences Similarities Grouping Classifying	a. Social Studies		
5. After the students have been assigned into groups of two, each pair will prepare and conduct a 2-4 minute telephone conversation before the class.	a. Students may select their own situations, but these should be checked by the teacher before preparation begins. Evaluation of the telephone conversations should be based on the guidelines established in Objective 4a. Suggestions for telephone conversations may be found in Modern Speech and Teen Talks, published by American Telephone and Telegraph.	a. Recalling Concluding Generalizing Questioning Making Choices			

OBJECTIVES	SUGGESTED IMPLEMENTATION ACTIVITIES	THINKING SKILL PROCESS	CURRICULUM RELATIONSHIP	PSYCHO-MOTOR RELATIONSHIP	AFFECTIVE RELATIONSHIP
GOAL: IV. To understand that the interview is a special kind of conversation and to develop the ability to respond effectively and confidently in an interview situation.					
1. After reading assigned references, the students will apply for jobs by presenting written resumes and being interviewed. (Final Simulation)	a. In this simulation the students will apply for jobs of their choosing. The teacher will interview three students to fill management positions in various companies or public service institutions. These three students will then write want ads for other positions. Once these are filled, the teacher will then determine what other positions need to be filled until every student has been hired. Each student must present a written resume before he can be hired for the job. b. This final activity should evaluate the student's success in developing listening skills, informal speaking skills, interviewing skills, and letter writing skills studied in Careers Unit I.	a. Observing Recalling Infer Causes Infer Effects Infer Feelings Generalizing Anticipating Making Choices			a.